

FIG. 1

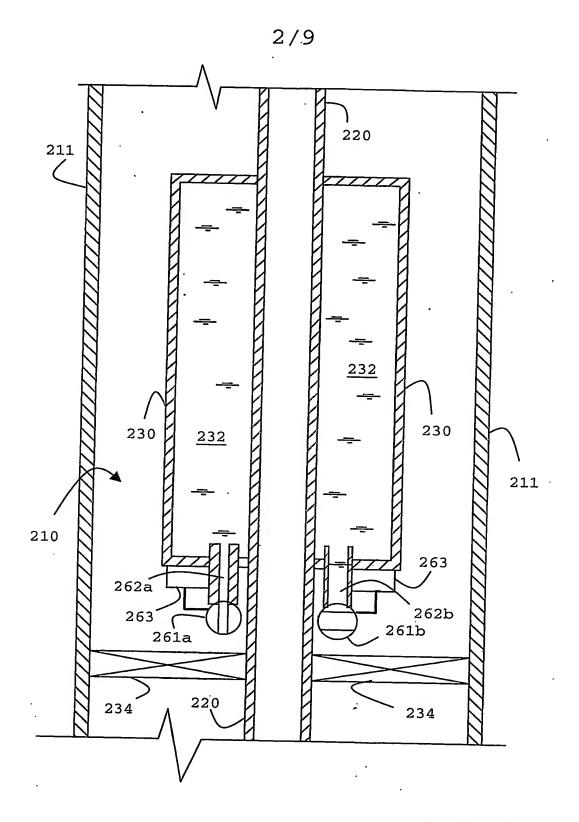


FIG. 2

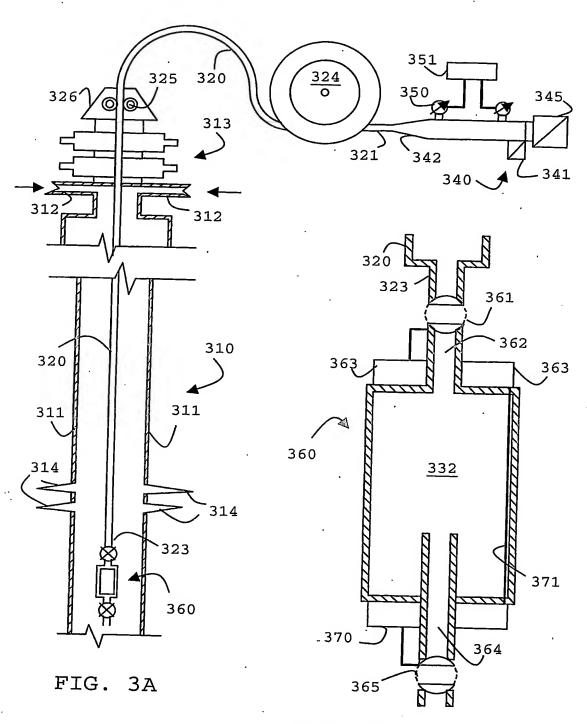


FIG. 3B

FIG. 4A

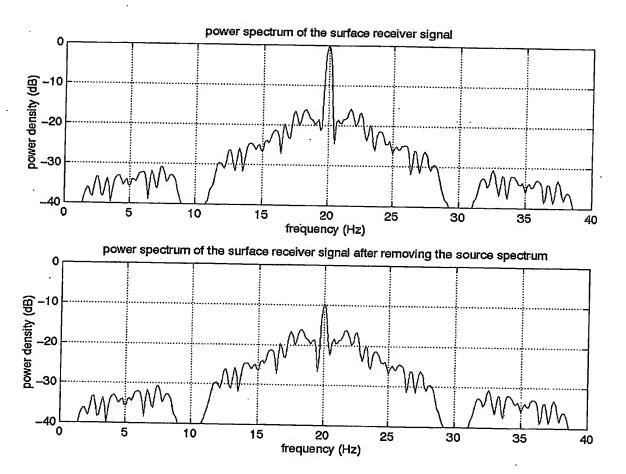


FIG. 4B

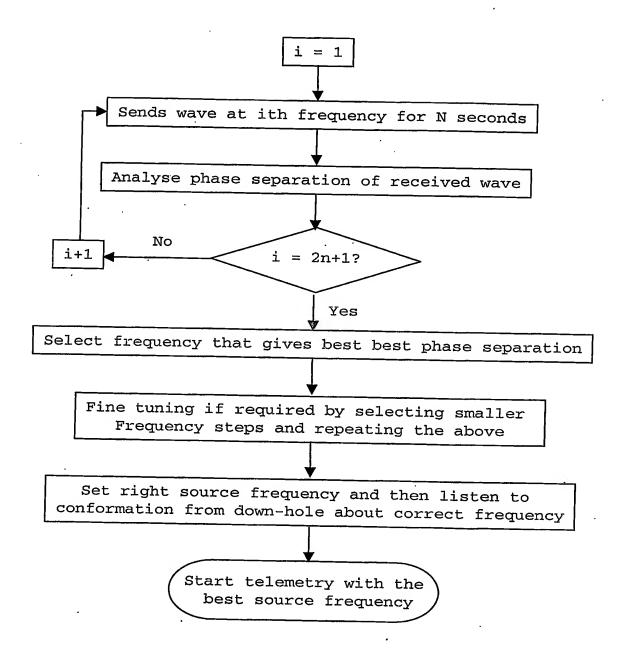


FIG. 5A

6/9

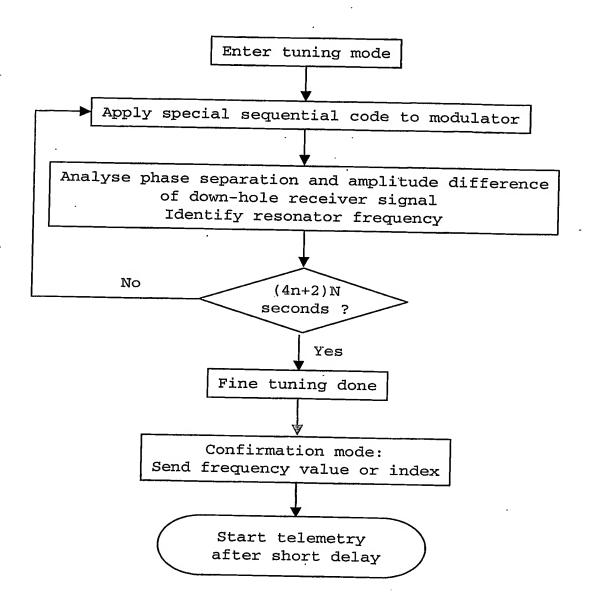
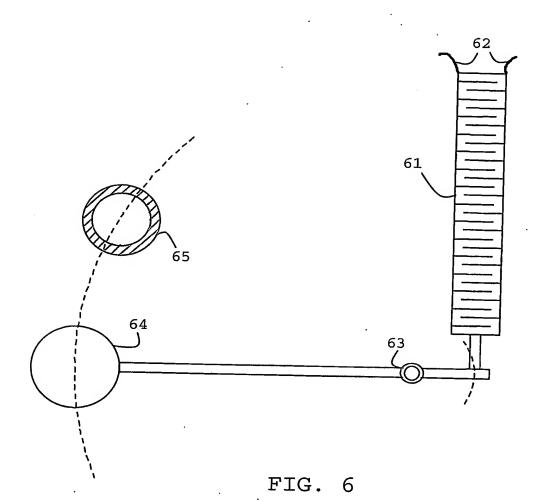
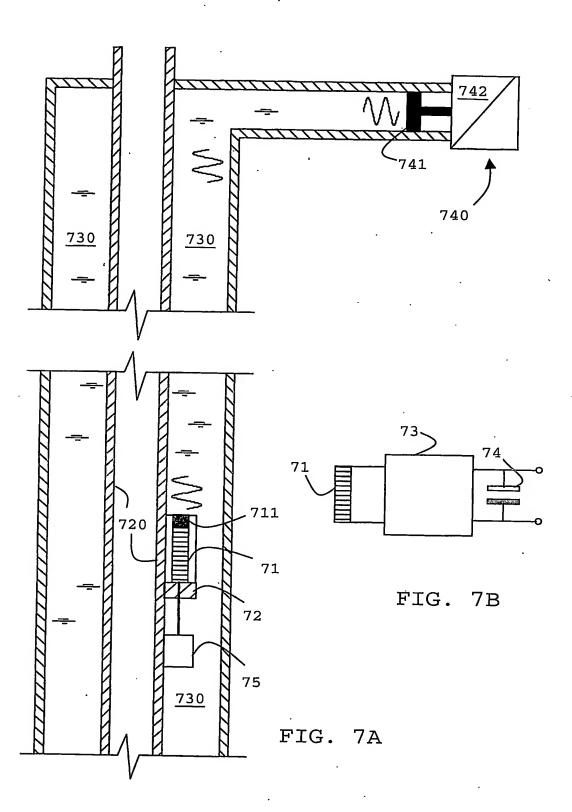


FIG. 5B

7/9



8/9



Establishing an acoustic channel through said borehole and terminating said acoustic channel at a down-hole end by a reflecting terminal

Generating from the surface an acoustic wave carrier signal through within said acoustic channel

Modulating amplitude and/or phase of said carrier wave in response to a digital signal using a modulator at the reflecting terminal

Detecting at the surface amplitude and/or phase related information of acoustic waves traveling within said acoustic channel

FIG. 8